PATENT
Docket No. FBR06132P0010US

REMARKS

Claims 1-25 are pending in the application, are rejected, and are at issue. Applicant's attorney would like to thank the Examiner for the courtesies extended during the recent telephone interviews. This amendment is presented responsive to the unofficial copy of the non-final action faxed on Aug. 30, 2004. Applicant's attorney will follow this amendment with a telephone call to the examiner.

The claim objections and Section 112 rejection are addressed with the above amendments. Withdrawal is requested.

Applicant traverses the rejection of claims 1-5, 7-10, 16-20, 23 and 25 as obvious over Lloyd ("Multi-room High-Fi Takes Control of the Home") in view of the Knekt System Installation Manual and further in view of Puvogel 4,733,389.

Independent claim 1 specifies a distributed stereo audio system including two or more speakers for the broadcast of stereo audio signals, a source of stereo audio signals, a stereo amplifier to amplify stereo audio signals and drive the speakers and a mains operated electrical power supply to provide power to the amplifier. The amplifier is located in the same room as the speakers and remote from the signal source and power supply. The amplifier is connected to the signal source and power supply by means of a category 5 four pair twisted cable which provides, in respective conductors of the twisted pairs, right channel audio signals from the signal source to the amplifier, left channel audio from the signal source to the amplifier and DC power from the power supplier to the amplifier.

None of the references, alone or in proper combination, discloses use of category 5 four pair twisted cable which carries signal sources to amplifiers in a stereo system and DC power from the power supply to the amplifier.

The Lloyd article describes a Knekt home entertainment system in which receivers are situated in each room and plug into a standard hi-fi system. As stated in the article, the system is designed to ". . . avoid laying bulky speaker cables throughout a house and pumping high-voltage currents across them from a centralized hi-fi system. Instead, we send unamplified signals across the home on "balanced" cables, which avoids picking up interference from other household devices along the way."

The Knekt system installation manual describes the Knekt system in the cited Lloyd article. Applicant refers to the paragraph in bold lettering at the bottom of page 6 of the installation manual which reads as follows:

> **Plan the wire route to *AVOID* (emphasis in original) running beside Mains/Power cables, appliances with motors, Dimmer switches, TV sets or anything that can produce Radio noise. We've seen Fans, Refrigerators and Dimmer switches totally confuse the system and degrade the sound!, so AVOID!!!!**

Page 14, under the heading "Bypassing wall sockets." includes a statement that "Mains should be supplied via normal sockets in the cupboard and a normal power cord to the products." Moreover, at page 24, under the heading "ROOM INSTALLATION.", the instructions indicate that the audio input should be connected to the RJ45 sockets. It otherwise indicates that the user should "Wire up mains, (power amplifier if using the KNEKT line receiver) and speakers."

As is apparent from the installation manual for the KNEKT system, as well as information previously provided, the KNEKT system not only does not teach delivering power on the same cable as the audio signals, the user is instructed to *AVOID* running the power in proximity to the audio signals.

Puvogel discloses a custom drop cable for data and power for a local area network. The cable is not a category 5 cable. Instead, it is a customized variant of the ethernet drop cable specified by IEEE 802.3. The only similarity between this ethernet drop cable and category 5 cable is that both use twisted pairs. In fact, the drop cable uses five twisted pairs each being individually shielded and grounded, and the overall cable being shielded and grounded. This is apparent in Fig. 1 showing three terminations for each pair. Thus, the cable must be used with a connector having 15 termination points plus a grounded connector housing. Moreover, the DC voltage on the fourth pair provides power for operation of a transceiver.

The shielded twisted pair cable used in Puvogel stops interference of radio and other electrical frequencies from corrupting data flow on the signal lines. The category 5 cable in the KNEKT system includes no such shielding. Also, the KNEKT audio system is a completely different application from the '389 patent network system. It is clearly improper to combine a disclosure of an ethernet drop cable and a cable used in a distributed stereo system which transmits audio signals.

In support of the rejection, the action considers only the fact that the KNEKT system uses category 5 cable for transmitting audio signals. The action ignores the express teachings in the

KNEKT system manual that teach away from carrying power, not only on any of the pairs, but even in proximity to the category 5 cable. As is currently required by the MPEP §2141.02:

> A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. (citation omitted)

One skilled in the art considering the teachings of the KNEKT installation manual would give no consideration to carrying power on one of the pairs of the category 5 cable. For this reason alone, the combination is improper. It is improper to pick and choose only portions of the KNEKT system disclosure in support of the rejection, while excluding portions of the reference that teach away from applicant's invention.

The cable in Puvogel uses shielding to enable the cable to transmit audio and power. The category 5 cable in the KNEKT system includes no shielding. Nor is shielding possible, as the specified connector does not provide terminations for any shielding. For this reason also, one skilled in the art would not consider combining the teachings of these references.

Additionally, Puvogel discusses transmitting power on a twisted pair for powering transceivers. The claimed invention specifies transmitting powers for powering an audio amplifier. Applicant submits that the teaching in Puvogel of transmitting power for powering a transceiver circuit does not provide a teaching of supplying sufficient power for amplification as would be required in the KNEKT system or the claimed system. The combination is improper for this reason as well.

In contrast to the cited references, the invention defined by claim 1 is based on the realization that both stereo audio signals and appropriate power signals can be transmitted simultaneously through a category 5 four twisted pair cable in a distributed stereo audio system. This realization enables such distributed stereo audio systems to be commercially viable, since the category 5 cable is readily available and requires no special hardware or software terminators. The invention is not obvious in that it would not generally be expected to be suitable because the high bandwidth twisted pairs are not expected to be able to carry power signals, and if they were expected to be able to cope with power signals, the expectation is that they would cause interference in the accompanying, unshielded signal carrying pairs. It is surprising and inventive that this has turned out to be so in that the cable has proven to be highly suitable for this unexpected purpose.

For the above reasons, independent claim 1 is not obvious over the cited references.

Because claim 1 is not obvious, the remaining claims, which depend therefrom, are likewise not obvious.

For the above reasons, claims 1-5, 7-10, 16-20, 23 and 25 are believed allowable and withdrawal of the rejection is requested.

The action includes rejections to claims 6 and 21 and separately claims 11-15, 22 and 24, based principally on the references discussed above. These rejections also reference an article entitled "An Introduction to Streamline". Applicant has not yet received a copy of this reference as this is in response to an unofficial copy of the action. Nevertheless, it is noted that the action cites this reference for disclosing a room control amplifier mounted flush on the wall. The action does not reference any teaching with respect to a category 5 cable carrying power. Therefore, the

reference does not supply the deficiencies noted above. Because independent claim 1 is allowable, dependent claims 6 and 21, and claims 11-15, 22 and 24, are not obvious and the rejections are improper and ought be withdrawn.

Reconsideration of the application and allowance and passage to issue are requested.

Respectfully submitted,

Date: September 2, 2004

F. William McLaughlin
Reg. No. 32,273

WOOD, PHILLIPS, KATZ,
CLARK AND MORTIMER
Citicorp Center, Suite 3800
500 W. Madison Street
Chicago, IL 60661-2511
(312) 876-1800